

## Claims

What is claimed is:

1. In a real time Internet facsimile communication system adapted to transmit a facsimile image data from a first communication terminal device to a second communication terminal device via a first communication network, a device for converting the facsimile image data into a packet data, a second communication network, a gateway device, and a third communication network, said gateway device comprising:

a storage unit for receiving the packet data from the second communication network;

an inverting unit for inverting the packet data into the facsimile image data;

and

a control unit for normally transmitting the facsimile image data to the second communication terminal device via the third communication network, and for appending an error data to a test data used for a training purpose and transmitting the error data together with the test data, instead of the facsimile image data, to the second communication terminal device via the third communication network if an amount of the facsimile image data stored in the storage unit is smaller than a prescribed amount.

2. The gateway device according to claim 1, wherein the error data consists of a series of predetermined numbers and the test data is a TCF signal.

3. The gateway device according to claim 2, wherein the series of predetermined numbers consists of a plurality of "1"s only.

4. The gateway device according to claim 1, wherein the first communication terminal device scans a document having a plurality of pages and prepares the facsimile image data to be sent to the first communication network, and when the image data of all the plurality of pages are not received by the gateway device or not transmitted to the second communication terminal device from the gateway device and the amount of the facsimile image data stored in the storage unit is smaller than the prescribed amount, then the gateway device receives again the facsimile image data from the second communication network and stores the facsimile image data into the storage unit.

5. The gateway device according to claim 1, wherein the control unit controls a modem speed such that the modem speed does not decrease when the control unit receives an FTT signal from the second communication terminal device in response to the error data and the test data sent to the second communication terminal device.

6. The gateway device according to claim 2, wherein the control unit controls a modem speed such that the modem speed does not decrease when the control unit receives an FTT signal from the second communication terminal device in response to the error data and the test data sent to the second communication terminal device.

7. The gateway device according to claim 3, wherein the control unit controls a modem speed such that the modem speed does not decrease when the control unit receives an FTT signal from the second communication terminal device in response to the error data and the test data sent to the second communication terminal device.

8. The gateway device according to claim 4, wherein the control unit controls a modem speed such that the modem speed does not decrease when the control unit receives an FTT signal from the second communication terminal device in response to the error data and the test data sent to the second communication terminal device.

9. The gateway device according to claim 1, wherein an amount of the error is at least four times as much as the test data.

10. For use with a real time Internet facsimile communication system adapted to transmit a facsimile image data from a first terminal device to a second terminal device via a first network, a device for converting the facsimile image data into a packet data, a second network, a gateway device, and a third network, said gateway device comprising:

storage means for receiving the packet data from the second network;  
means for inverting the packet data into the facsimile image data;

and

control means for normally transmitting the facsimile image data to the second terminal device via the third network, and for appending an error data to a test data used for a training purpose and transmitting the error data together with the test data, instead of the facsimile image data, to the second terminal device via the third network if an amount of the facsimile image data stored in the storage means is smaller than a prescribed amount.

11. The gateway device according to claim 10, wherein the error data consists of a series of predetermined numbers and the test data is a TCF signal.

12. The gateway device according to claim 11, wherein the series of predetermined numbers consists of a plurality of "1"s only.

13. The gateway device according to claim 10, wherein the first terminal device scans a document having a plurality of pages and prepares the facsimile image data to be sent to the first network, and when the image data of all the plurality of pages are not received by the gateway device or not transmitted to the second terminal device from the gateway device and the amount of the facsimile image data stored in the storing means is smaller than the prescribed amount, then the gateway device receives again the facsimile image data from the second network and stores the facsimile image data into the storage means.

14. The gateway device according to claim 10, wherein the control means controls a modem speed such that the modem speed does not decrease when the control means receives an FTT signal from the second terminal device in response to the error data and the test data sent to the second terminal device.

15. The gateway device according to claim 11, wherein the control means controls a modem speed such that the modem speed does not decrease when the control means receives an FTT signal from the second terminal device in response to the error data and the test data sent to the second terminal device.

16. The gateway device according to claim 12, wherein the control means controls a modem speed such that the modem speed does not decrease when the control means receives an FTT signal from the second terminal device in response to the error data and the test data sent to the second terminal device.

17. The gateway device according to claim 13, wherein the control means controls a modem speed such that the modem speed does not decrease when the control means receives an FTT signal from the second terminal device in response to the error data and the test data sent to the second terminal device.

18. The gateway device according to claim 10, wherein an amount of the error is at least four times as much as the test data.